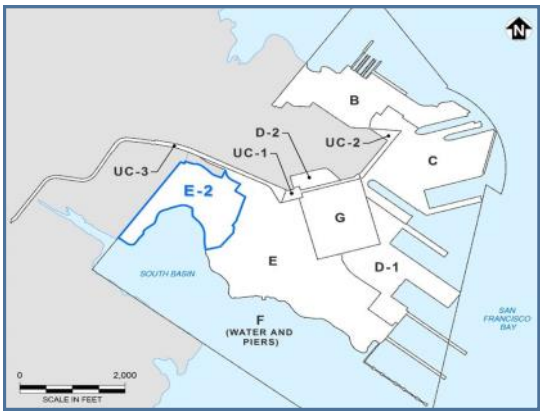
FACT SHEET
Hunters Point Naval Shipyard
Parcel E-2 Landfill: Remedy and Management

July 2020

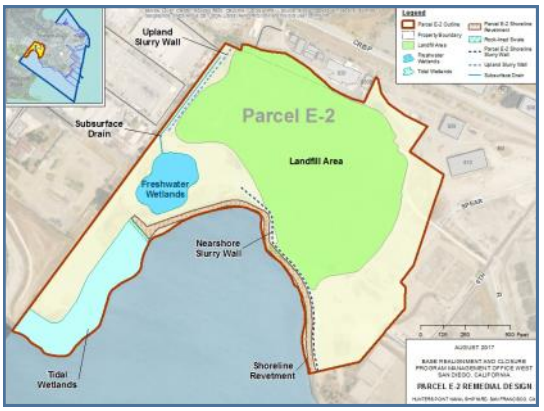
Parcel E-2 Landfill Overview

Parcel E-2 consists of 47 acres in the southwest portion of Hunters Point Naval Shipyard (HPNS) that was created between the 1940's and the 1960's by filling the area along the edges of the San Francisco Bay with artificial fill. Parcel E-2 includes a 22-acre landfill for the historic disposal of construction debris, municipal-type trash, and a variety of industrial wastes.

The Navy worked closely with regulatory agencies and the City of San Francisco during the development of the proposed cleanup solution for the landfill, which was outlined in the Navy's 2011 Proposed Plan (PP). After a public comment period and regulatory review, this remedy was documented in the November 2012 Final Record of Decision (ROD), a public document that describes the selected remedy for the cleanup of a site that has been agreed upon by the Navy and the regulators. The community was engaged throughout the PP and ROD process, and their concerns and feedback were taken into account when choosing the selected remedy.



Location of Parcel E-2 at HPNS



Detail of areas that make up Parcel E-2

HPNS Landfill Contamination

The Navy has studied the landfill at Parcel E-2 extensively, including the review of historical records and collection of hundreds of samples. Many investigations have been conducted by the Navy, including digging test pits, drilling boreholes to take samples from below the ground, using radiation detectors over the entire surface, and sampling the water from under the landfill. Based on this work, the Navy knows that municipal trash, construction debris, soil, and shipyard industrial waste were buried in the landfill.

Cleaning Up the HPNS Landfill

The remedy, as summarized in the Parcel E-2 PP and ROD, removes access to any possible contamination left beneath the ground. Installation of underground barriers, shoreline revetment, targeted excavations, and the first step of the engineered cap have been completed. Upcoming activities at the site include installation of the engineered cap and soil cover, scheduled for 2021. In addition, the Navy is building two new wetlands to enhance the area's natural plant and wildlife communities. These actions protect humans and the environment for its future use as open space.

Chemical Contamination

Results of samples taken in the HPNS landfill showed low levels of contamination, of which most were within United States Environmental Protection Agency's (USEPA's) acceptable risk range. Lead, Polychlorinated Biphenyls (PCBs), and chemicals related to asphalt were the most common contaminants found. The areas with the highest levels of chemical contamination were excavated and removed from the site.

Radiological Contamination

The Navy has found glow-in-the-dark dials and markers during several excavations. These devices were painted with radium, which is a radioactive material that is no longer used. The Navy has excavated the two areas most likely to have such devices; there may be more buried throughout the landfill. The radiation levels from these devices are low and do not pose a risk to human health or the environment if they remain underground.

Landfill Gases

Landfill gases are created when buried debris (such as wood and paper) naturally decomposes. Landfills produce methane and other gases, including carbon dioxide, nitrogen, and oxygen. While these gases are not toxic, methane must be controlled due to its flammable nature in concentrations greater than 5% by volume. There are small amounts of other gases present that are collectively monitored and referred to as non-methane organic compounds (NMOCs).

HPNS Landfill Gas Collection Milestones

2002
- Nonstandard Data Gaps Investigation to characterize and delineate landfill gas (LFG)
- Installation of gas monitoring probes (GMPs)

2003
- Time-critical Removal Action (TCRA) to address high methane levels in data gaps investigation
- LFG control system installed
- Vents installed to remove methane on landfill side

2004
- Monthly LFG monitoring begins

2008
- Navy and regulatory agencies agree to reduce number of monthly sampling points to 3
- Sampling continues quarterly at all 26 points

2021
- Installation of new LFG control system planned

Landfill Gas Monitoring and Management

The Navy constructed an engineered cap over the landfill in 2000 to contain and collect gases that resulted from decomposing materials within the landfill. Gas monitoring probes (GMPs) are used to collect data about the types and concentrations of gases released into the air from the landfill. In 2003, a landfill gas barrier wall, monitoring probes, and extraction wells were installed along the northern Parcel E-2 boundary to control gas from moving past the landfill boundary to the UCSF compound. This gas control system has served as an interim solution until the final remedy is constructed.

A graphic representation of the interim HPNS landfill gas control system at the northern boundary of Parcel E-2 is shown on page 3.

Control of Landfill Gas Migration from HPNS

If GMPs detect methane and NOMCs above their respective Navy action levels, the active vapor extraction is performed to control the release of gas into the atmosphere.

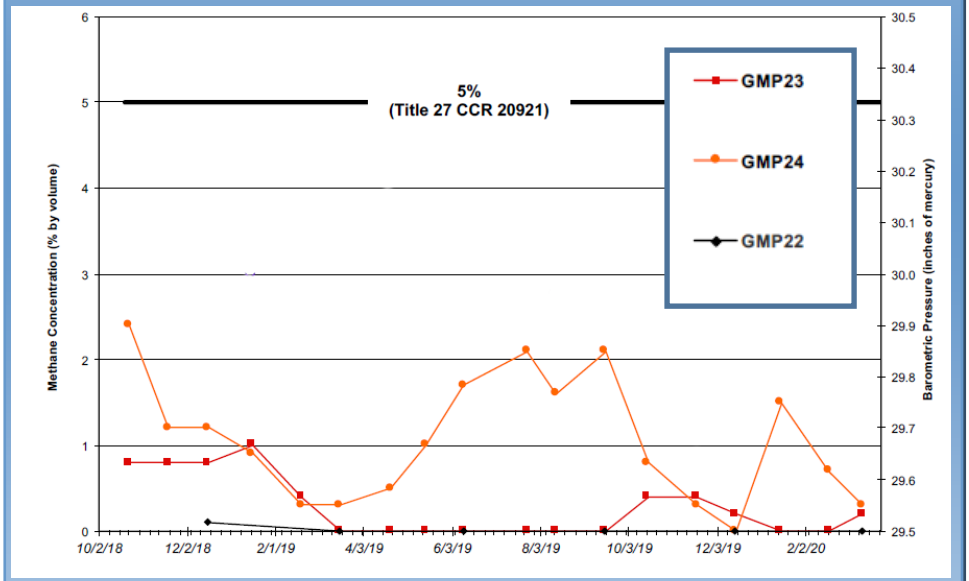
Monitoring data collected since January 2004 has shown that landfill gas is being properly controlled, NMOC concentrations are within safe limits, and no methane exceedances above the action level have been detected in the monitoring probes located on UCSF property.

Continued Management of Landfill Gases

The Navy continues to conduct monthly and quarterly monitoring for both methane and NMOCs. A new landfill gas control system will include a network of new gas extraction wells connected to underground piping. In addition, charcoal filters will be used to remove chemicals, and an enclosed flare to eliminate the release of methane gas into the air.

Navy Landfill Gas Plan and Methane Action Levels

The 2004 Final Interim Landfill Gas Monitoring and Control Plan established the standards for gas monitoring in and around the landfill. It sets conservative limits for the releases of gases at HPNS to ensure the remedial solution is protective of human health. Due to its flammable nature, the State of California has established a regulatory action level of 5% by volume for methane gas. The Navy's action level for methane is 2.5% by volume.



Methane Concentrations at UCSF Campus GMPs
October 2018—March 2020, Navy Quarterly Gas Monitoring Results

Dust Control During Cleanup

Dust occurs naturally all around us and may be worsened by activities like construction, excess buildup of dirt on roadways, and weather conditions. Airborne dust affects every individual differently but can cause allergies, rashes, and aggravate respiratory conditions, such as asthma. As soil is moved, there is a risk of releasing dust that has chemicals and asbestos which occur naturally in the Hunters Point environment. Contractors prepare their own dust control plans specific to proposed fieldwork. Several common dust control measures used at HPNS are outlined below. To date, air monitoring test results show site activities are protective of human health, including members of the surrounding community, tenants, and workers at HPNS. Air monitoring results can be found on the Navy's website at www.bracpmo.navy.mil and on the DTSC website at www.envirostor.dtsc.ca.gov.

Watering System and Soil Maintenance

Water is used to minimize dust at active construction sites

Stockpiles of soil are sprayed with a soil cementing compound to prevent windblown dust

Straw waddles are placed at the base of soil stockpiles to prevent runoff during heavy rains

Durable Covers

Soil covers with native vegetation reduce dust in open spaces

Asphalt pavement reduces dust in larger areas

Rock walls minimize dust along the shoreline

Truck Management

Truck beds containing soil are required to be covered

Before exiting HPNS, trucks pass through the tire wash and over rumble strips

Streets are swept daily in active work areas

Air Monitoring

Air monitoring equipment is placed in work areas with ongoing construction activities

On-site equipment tests for both dust and radiological contamination

Regulatory agencies monitor dust to ensure Navy dust control measures are working

Community Resources

HPNS Navy Point of Contact

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Para más información sobre el programa de limpiezade la Marina en Hunters Point Naval Shipyard, favor de dejar un mensaje en (833) 202-5888.

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